

REMARKS/ARGUMENTS

Applicants thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office Action, and amended as necessary to more clearly and particularly describe the subject matter that Applicants regard as the invention. Applicants respectfully submit that the present application is in a condition for allowance in view of the following remarks.

Claim Rejections – 35 U.S.C. § 102(b)

Claims 1 and 5 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,530,923 to Heinonen *et al.* (hereinafter “Heinonen”). However, Applicants respectfully traverse this rejection since Heinonen fails to teach every feature of the invention recited in amended claims 1 and 5.

Regarding amended claim 1, Heinonen fails to teach, suggest or otherwise render predictable “a multiplier for generating a multiplied signal to be transmitted to the high-frequency power amplifier by multiplying a phase-modulated signal by an amplitude modulated signal.” Heinonen is silent regarding a phase-modulated signal, and thus, fails to teach the claimed multiplier multiplying the phase-modulated signal and an amplitude-modulated signal.

Specifically with regard to claim 5, Heinonen fails to teach, suggest or otherwise render predictable, “separating from a base-band modulated signal an amplitude-modulated signal,” and that the “power supply voltage in the first mode is based at least in part on the amplitude-modulated signal separated from the base-band modulated signal.” Heinonen fails to disclose the separation of an amplitude modulated signal from a base-band modulated signal. It follows that Heinonen also fails to teach that the power supply in the first mode is based at least in part on the separated amplitude-modulated signal.

For at least the above reasons, Heinonen fails to teach every limitation found in amended claims 1 and 5 as required to maintain a rejection of those claims under 35 U.S.C. §102(b). Further, since claims 2-4 and 6 depend from claim 1, those claims are also not anticipated by Heinonen for the purposes of 35 U.S.C. §102(b).

Claim Rejections – 35 U.S.C. § 103(a)

Claim 2 also stands rejected under 35 U.S.C. §103(a) as being unpatentable over Heinonen in view of U.S. Patent Application Publication No. 2006/0141964 to Otaka et al. (hereinafter “Otaka”). However, Applicants respectfully traverse this rejection since the combination of Heinonen in view of Otaka fails to teach every feature of the invention recited in amended claim 2.

The absence of the claimed multiplier and variable gain amplifier are correctly acknowledged in the Office action. However, the multiplier of Otaka cited is actually for orthogonal separation of the signal, and not amplitude modulation of the transmitting signal as claimed. For at least this reason, the combination of Heinonen and Otaka fails to teach, suggest or otherwise render predictable, every limitation found in amended claim 2 as required to maintain a rejection of that claim under 35 U.S.C. §103(a).

New claims 7 and 8 have been added by way of this amendment. Regarding claim 7, Heinonen also fails to teach, suggest or otherwise render predictable “a low-limit limiting circuit operable in the first mode to establish a minimum value of the amplitude modulated signal to maintain operation of the high-frequency power amplifier as the nonlinear amplifier.” According to Heinonen, the operation of the high-frequency amplifier is maintained based on the transmitted signal, not on a value of the amplitude-modulated signal to be multiplied with a phase-modulated signal to be transmitted to the high-frequency amplifier.

Similarly, regarding claim 8, Heinonen also fails to teach, suggest or otherwise render predictable “an amplitude and phase separator for separating a base-band modulated signal into an amplitude-modulated signal and a phase-modulated signal,” and “an amplifier for amplifying the amplitude-modulated signal and transmitting an amplified signal to be delivered as supply power to the high-frequency amplifier in the first mode.”

For at least the above reasons, Heinonen also fails to teach every limitation found in new claims 7 and 8 as required to maintain a rejection of those claims under 35 U.S.C. §102(b).

The remaining claims in the present application are allowable for the limitations therein and for the limitations of the claims from which they depend.

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. NGB-39582.

Respectfully submitted,
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Date: October 31, 2008